CLAIMS

1. A path error monitoring method for monitoring for an error in a communication path in a synchronous network by using an error detection code inserted into a first predetermined byte in an overhead of transmitted information, comprising the steps of:

performing an error detection code operation for a predetermined range of the transmitted information in a sender side;

inserting the obtained error detection code into a second predetermined byte different from said first predetermined byte in the overhead of the transmitted information and sending the inserted transmitted information;

performing an error detection code operation for a predetermined range of the inserted transmitted information received in a receiver side; and

monitoring for an error in a communication path between the sender side and the receiver side by comparing the obtained error detection code with the second predetermined byte in the inserted transmitted information.

2. A sender side apparatus to which a path error monitoring method for monitoring for an error in a communication path in a synchronous network by using an error detection code inserted into a first predetermined byte in an overhead in transmitted information is applied, comprising:

a second predetermined byte inserting part performing an error detection code operation for a

predetermined range in the transmitted information
and inserting the obtained error detection code into
a second predetermined byte different from said
first predetermined byte in the overhead in the
5 transmitted information.

10   3. A receiver side apparatus to which a
path error monitoring method for monitoring for an
error in a communication path in a synchronous
network by using an error detection code inserted
into a first predetermined byte in an overhead in
15 transmitted information is applied, comprising:
        a second predetermined byte comparing part
performing an error detection code operation for a
predetermined range in the transmitted information
received and comparing the obtained error detection
20 code with a second predetermined byte in the
transmitted information received.

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        4. The sender side apparatus as claimed
in claim 2, wherein said second predetermined byte
inserting part has an inverting part inverting the
error detection code obtained through the error
30 detection code operation alternatively at a
predetermined period and inserting the resulting
error detection code into said second predetermined
byte.

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5. The receiver side apparatus as claimed in claim 3, further comprising a synchronizing part taking synchronization when a comparison result of said second predetermined byte comparing part indicates switching from a status where all bits coincide to a status where neither bit coincides.

6. The sender side apparatus as claimed in claim 2, wherein said second predetermined byte is within an operation range of said first predetermined byte, further comprising a first correcting part computing difference information between original contents in the second predetermined byte and said error detection code obtained through said error detection code operation and correcting contents in said first predetermined byte by inserting a difference between said difference information and original contents in the first predetermined byte into said first predetermined byte.

7. The receiver side apparatus as claimed in claim 3, wherein said second predetermined byte is within an operation range of said first predetermined byte, further comprising a second correcting part computing difference information between contents in the second predetermined byte in the transmitted information received and the error detection code obtained through said error detection code operation and correcting contents in said first predetermined byte by inserting a difference between

said difference information and contents in the
first predetermined byte in the transmitted
information received into said first predetermined
byte, and a fixed value inserting part inserting a
5   fixed value into the second predetermined byte in
the transmitted information received.

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8. The receiver side apparatus as claimed
in claim 7, wherein said fixed value inserting part
is capable of variably setting said fixed value.

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9. The sender side apparatus as claimed
in claim 6, further comprising a first path alarm
20   detecting part detecting a path alarm from contents
of the overhead in transmitted information, wherein
said second predetermined byte inserting part and
said first correcting part are halted when said path
alarm is detected.

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10. The receiver side apparatus as
30   claimed in claim 3, further comprising a second path
alarm detecting part detecting a path alarm from
contents of the overhead in transmitted information
received, wherein said second correcting part and
said fixed value inserting part are halted when said
35   path alarm is detected.